obtained from banded and radio-tagged individuals provided preliminary information on activity patterns, foraging behavior, and interactions with other avian scavengers.

HABITAT VARIATION AND POPULATION REGULATION IN THE EUROPEAN SPARROWHAWK *ACCIPITER NISUS*

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This paper will relate territory occupancy and breeding success in *Accipiter nisus* to the age and structure of the forest. Both measures of performance were best in young forest (20–30 years) and deteriorated as the forest aged. In forests older than 40 years, reproduction was insufficient to offset mortality. Population persistence was thus dependent on the continued presence of young forest.

HOME RANGE DISTRIBUTION AND HABITAT USAGE OF RED-TAILED HAWKS AND RED-SHOULDERED HAWKS DURING DORMANT SPRAY SEASON IN THE CENTRAL VALLEY

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Habitat usage and distribution of wintering hawks in a 52 sq. mi. area in the central valley of California were analyzed to look at pesticide exposure during the winter dormant spray season. Thirty-six Red-tailed hawks (*Buteo jamaicensis*) and four Red-shouldered hawks (*B. lineatus*) were trapped and equipped with backpack-style radio transmitters during December and January, 1990–92 near Modesto. Tagged birds were randomly located on a daily basis for daytime habitat use information and periodically located by triangulation at night to determine roost sites. The GIS program CAMRIS was used to calculate home ranges by the density surface method and grid size selection was based upon hunting behavior of the birds. Home range analysis indicated a preference of some birds to use orchards exclusively while others preferred open habitat. Of the 28 birds establishing winter ranges, 12 remained as residents. Data suggest that selection of habitat was influenced by the numbers of resident birds, orchard irrigation techniques, orchard age, and degree of human disturbance. Five radio-tagged birds are known dead: three of the deaths were due to electrocution, gunshot, and automobile collision; one band was returned from northeastern Oregon with cause of death unknown; and the last bird was decomposed too badly for diagnosis. Supported by the Almond Board of California.

DIETARY AND ENERGETIC ANALYSIS OF BAT FALCON PAIRS DURING THE BREEDING SEASON IN TIKAL, GUATEMALA

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Four pairs of bat falcons, *Falco rufigularis,* were observed in lowland primary rain forest in northern Guatemala's Tikal National Park during 1991. Day-long observations at all nests and daily prey remains and pellet collection at one nest revealed differences in prey species, foraging habits, and rates across the breeding season. Differences in habitat were reflected in dietary differences between nesting pairs. Seasonal precipitation offered pulses of ephemeral insect prey, which accounted for a substantial percentage of their diets, nearly exclusively during stages of brooding. Novel foraging behavior was observed and energetic costs were estimated for one pair, whose foraging flights could be observed in near entirety.

USE OF GOSHAWK STICK NESTS BY GREAT GRAY OWLS ON THE TARGHEE NATIONAL FOREST

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Between 1990 and 1992, over 30 new Great Grey Owl breeding territories have been documented on the Targhee National Forest in southeastern Idaho. The majority of these territories have been found in conjunction with an ongoing goshawk monitoring project and occur in Douglas-fir and mixed conifer habitat. Of 64 identified goshawk nests, 14 (22%) have been used by nesting owls. Nine of these 14 nests (64%) have been used following some level of timber harvest activity in the surrounding area. This paper will compare nest site characteristics between stick nests used by goshawks with those used by both hawks and owls. Potential effects of timber harvesting on nest site availability for both species will be discussed.

PEREGRINE FALCON RESTORATION IN THE MIDWEST: 1992 STATUS REPORT

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1992 marked the tenth year of releases of captively propagated peregrine falcons into the midwestern section of the United States. A total of 111 falcons were released at six sites, bringing the total number released over ten years to 773. States or provinces included in this assessment are Minnesota, Wisconsin, Iowa, Michigan, Illinois, Indiana, Ohio, Missouri, Nebraska, and Manitoba (Canada). Occupancy and productivity at sites occupied by returning adults were consistent with earlier projections based on population modeling. A total of 26 sites was occupied and a total of 65 young was fledged. Among this total were 13